

**PATENT**

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

**(Case No. 97,008-X)**

|                              |   |                                  |
|------------------------------|---|----------------------------------|
| In re Application of:        | ) |                                  |
|                              | ) |                                  |
| COPELAND, et. al             | ) |                                  |
|                              | ) | Group Art Unit: Not yet assigned |
| Serial No.: Not yet assigned | ) |                                  |
|                              | ) | Examiner: Not yet assigned       |
| Filed: January 22, 2002      | ) |                                  |
|                              | ) |                                  |
| For: Automated Biological    | ) |                                  |
| Reaction Apparatus           | ) |                                  |

Commissioner for Patents  
Washington, DC 20231

**PRELIMINARY AMENDMENT**

Dear Sir:

Please enter this preliminary amendment for the above-referenced case.

**IN THE SPECIFICATION**

Please amend lines 3-5 at page 1 to read as follows:

This is a continuation of application Serial No. 09/452,309, filed on December 1, 1999, pending, which is a continuation of application Serial No. 08/906,678, filed August 5, 1997, abandoned, which is a continuation of application Serial No. 08/479,415, filed June 6, 1995, U.S. Patent No. 5,654,200, which is a division of application Serial No. 352,966, filed December 9, 1994, U.S. Patent No. 5,595,707, which is a continuation of application Serial No. 924,052, filed August 31, 1992, abandoned, which is a continuation-in-part of application Serial No. 488,601, filed March 2, 1990, abandoned.

After page 12, line 10, please insert the following paragraph:

FIG. 34 is a schematic of a jet drain for draining liquid from an upper surface of a slide.

At page 41, line 3-10, please amend the paragraph to read:

Immunohistological methods for which the apparatus of this invention are particularly suitable are described in concurrently filed, commonly assigned patent application Serial No. 07/488,601, filed March 2, 1990, now abandoned (Attorney Docket No. 193.0007), the entire contents of which are hereby incorporated by reference. A typical immunohistological method, as carried out with the apparatus of this invention includes the following steps.

**IN THE CLAIMS:**

Please cancel claim 1 without prejudice. Please add the following claims 72-98 as follows. A marked up version of the amended claims, to show all the changes, is attached hereto on pages separate from the amendment in accordance with 37 CFR 1.121(c)(1)(ii).

72. A method of dispensing reagents onto a slide, the method comprising the steps of:  
providing at least one reagent container;  
providing at least one slide on a slide support;  
automatically identifying the reagent container using a computer, the step of automatically identifying being based on information associated with the reagent container;  
automatically determining whether reagent in the reagent container should be dispensed onto the slide; and

dispensing the reagent in the reagent container onto the slide based on the determination of whether the reagent in the reagent container should be dispensed onto the slide.

73. The method of claim 72, wherein the step of automatically determining whether reagent in the reagent container should be dispensed onto the slide includes identifying information from the slide.

74. The method of claim 73, further comprising the steps of:  
determining a position of the slide; and  
correlating the position of the slide with the information identifying the slide.

75. The method of claim 73, wherein the information identified from the slide includes a slide barcode.

76. The method of claim 75, wherein the step of identifying information from the slide includes reading the slide barcode.

77. The method of claim 76, further comprising the steps of:  
determining a position of the slide; and  
correlating the position of the slide with the slide barcode.

78. The method of claim 77, wherein the step of determining a position of the slide includes determining a position of the slide relative to a home position.

79. The method of claim 72, wherein the information associated with the reagent container includes a reagent barcode.

80. The method of claim 79, wherein the reagent barcode is placed on the reagent container.

81. The method of claim 72, wherein the step of automatically identifying the reagent container using a computer includes the steps of:

- providing a bar code reader;
- reading a reagent bar code placed on the reagent container using the bar code reader thereby acquiring reagent information; and
- sending the reagent information to the computer.

82. The method of claim 81, further comprising the steps of:

- determining position information for the reagent container; and
- sending the position information to the computer.

83. The method of claim 82, wherein a reagent carousel supports the reagent container and wherein the step of determining position information for the reagent container includes homing the reagent carousel and determining an indexed position of a motor drive for the reagent container.

84. The method of claim 81, wherein the reagent bar code identifies the reagent in the reagent container.

85. The method of claim 84, wherein the step of automatically identifying the reagent container using a computer is performed at a beginning of a slide treatment operation.

86. The method of claim 85, wherein the step of automatically identifying the reagent container using a computer further includes correlating a position of the reagent container with the reagent carousel.

87. The method of claim 81, wherein the reagent container is in a reagent carousel and wherein the step of automatically identifying reagent further includes the step of rotating the reagent carousel so that the reagent bar code on the reagent container is read by the bar code reader.

88. The method of claim 72, further comprising the step of moving the reagent container and the slide support relative to one another to position the reagent container over the slide.

89. The method of claim 88, wherein a reagent carousel supports the reagent container and wherein the step of moving the reagent container and the slide support relative to one another includes moving a drive plate which supports the reagent carousel to place the reagent container in a reagent delivery zone.

90. The method of claim 72, wherein the step of dispensing the reagent in the reagent container onto the slide includes the step of pressuring the reagent container thereby metering a volume of reagent onto the slide.

91. The method of claim 90, wherein the step of pressuring the reagent container includes activating an air cylinder to move downward into positive contact with the reagent container.

92. A method of dispensing reagents onto a slide, the method comprising the steps of:  
providing at least one reagent container;  
providing at least one slide on a slide support;  
automatically identifying the reagent container using a computer, the step of automatically identifying being based on information associated with the reagent container;  
automatically determining whether the reagent in the reagent container should be dispensed onto the slide;  
moving the reagent container and the slide support relative to one another to position the reagent container over the slide; and  
dispensing the reagent in the reagent container onto the slide based on the determination of whether the reagent in the reagent container should be dispensed onto the slide.

93. The method of claim 92, wherein the information associated with the reagent container includes a reagent barcode.

94. The method of claim 93, wherein the reagent barcode is placed on the reagent container.

95. The method of claim 92, wherein the step of automatically identifying the reagent container using a computer includes the steps of:

providing a bar code reader;

reading a reagent bar code placed on the reagent container using the bar code reader; and

sending information from the reading of the reagent bar code to the computer.

96. The method of claim 95, wherein the reagent container is supported on a reagent carousel and wherein the step of moving the reagent container and the slide support relative to one another includes moving a drive plate which supports the reagent carousel to place the reagent container in a reagent delivery zone.

97. The method of claim 92, wherein the step of dispensing the reagent in the reagent container onto the slide includes the steps of:

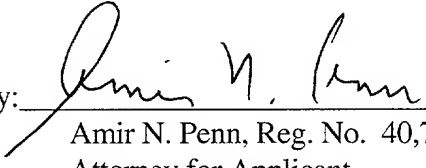
pushing downward on the reagent container; and

applying a metered volume of reagent onto the slide.

98. The method of claim 97, wherein the step of pushing downward on the reagent container includes activating an air cylinder to move downward in order to push the reagent container.

Respectfully submitted,

McDonnell Boehnen Hulbert & Berghoff

By:   
Amir N. Penn, Reg. No. 40,767  
Attorney for Applicant

DATED: 1/22/02



APPENDIX UNDER 37 CFR 1.121(c)

**IN THE SPECIFICATION**

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**IN THE CLAIMS**

72. (New claim) A method of dispensing reagents onto a slide, the method comprising the steps of:

providing at least one reagent container;

providing at least one slide on a slide support;

automatically identifying the reagent container using a computer, the step of automatically identifying being based on information associated with the reagent container;

automatically determining whether reagent in the reagent container should be dispensed onto the slide; and

dispensing the reagent in the reagent container onto the slide based on the determination of whether the reagent in the reagent container should be dispensed onto the slide.

73. (New claim) The method of claim 72, wherein the step of automatically determining whether reagent in the reagent container should be dispensed onto the slide includes identifying information from the slide.

74. (New claim) The method of claim 73, further comprising the steps of:  
determining a position of the slide; and  
correlating the position of the slide with the information identifying the slide.

75. (New claim) The method of claim 73, wherein the information identified from the slide includes a slide barcode.

76. (New claim) The method of claim 75, wherein the step of identifying information from the slide includes reading the slide barcode.

77. (New claim) The method of claim 76, further comprising the steps of:  
determining a position of the slide; and  
correlating the position of the slide with the slide barcode.

78. (New claim) The method of claim 77, wherein the step of determining a position of the slide includes determining a position of the slide relative to a home position.

79. (New claim) The method of claim 72, wherein the information associated with the reagent container includes a reagent barcode.

80. (New claim) The method of claim 79, wherein the reagent barcode is placed on the reagent container.

81. (New claim) The method of claim 72, wherein the step of automatically identifying the reagent container using a computer includes the steps of:

providing a bar code reader;

reading a reagent bar code placed on the reagent container using the bar code reader thereby

acquiring reagent information; and

sending the reagent information to the computer.

82. (New claim) The method of claim 81, further comprising the steps of:  
determining position information for the reagent container; and  
sending the position information to the computer.

83. (New claim) The method of claim 82, wherein a reagent carousel supports the reagent container and wherein the step of determining position information for the reagent container includes homing the reagent carousel and determining an indexed position of a motor drive for the reagent container.

84. (New claim) The method of claim 81, wherein the reagent bar code identifies the reagent in the reagent container.

85. (New claim) The method of claim 84, wherein the step of automatically identifying the reagent container using a computer is performed at a beginning of a slide treatment operation.

86. (New claim) The method of claim 85, wherein the step of automatically identifying the reagent container using a computer further includes correlating a position of the reagent container with the reagent carousel.

87. (New claim) The method of claim 81, wherein the reagent container is in a reagent carousel and wherein the step of automatically identifying reagent further includes the step of rotating the reagent carousel so that the reagent bar code on the reagent container is read by the bar code reader.

88. (New claim) The method of claim 72, further comprising the step of moving the reagent container and the slide support relative to one another to position the reagent container over the slide.

89. (New claim) The method of claim 88, wherein a reagent carousel supports the reagent container and wherein the step of moving the reagent container and the slide support relative to one another includes moving a drive plate which supports the reagent carousel to place the reagent container in a reagent delivery zone.

90. (New claim) The method of claim 72, wherein the step of dispensing the reagent in the reagent container onto the slide includes the step of pressuring the reagent container thereby metering a volume of reagent onto the slide.

91. (New claim) The method of claim 90, wherein the step of pressuring the reagent container includes activating an air cylinder to move downward into positive contact with the reagent container.

92. (New claim) A method of dispensing reagents onto a slide, the method comprising the steps of:

providing at least one reagent container;

providing at least one slide on a slide support;

automatically identifying the reagent container using a computer, the step of automatically identifying being based on information associated with the reagent container;

automatically determining whether the reagent in the reagent container should be dispensed onto the slide;

moving the reagent container and the slide support relative to one another to position the reagent container over the slide; and

dispensing the reagent in the reagent container onto the slide based on the determination of whether the reagent in the reagent container should be dispensed onto the slide.

93. (New claim) The method of claim 92, wherein the information associated with the reagent container includes a reagent barcode.

94. (New claim) The method of claim 93, wherein the reagent barcode is placed on the reagent container.

95. (New claim) The method of claim 92, wherein the step of automatically identifying the reagent container using a computer includes the steps of:

providing a bar code reader;

reading a reagent bar code placed on the reagent container using the bar code reader; and

sending information from the reading of the reagent bar code to the computer.

96. (New claim) The method of claim 95, wherein the reagent container is supported on a reagent carousel and wherein the step of moving the reagent container and the slide support relative to one another includes moving a drive plate which supports the reagent carousel to place the reagent container in a reagent delivery zone.

97. (New claim) The method of claim 92, wherein the step of dispensing the reagent in the reagent container onto the slide includes the steps of:

pushing downward on the reagent container; and

applying a metered volume of reagent onto the slide.

98. (New claim) The method of claim 97, wherein the step of pushing downward on the reagent container includes activating an air cylinder to move downward in order to push the reagent container.